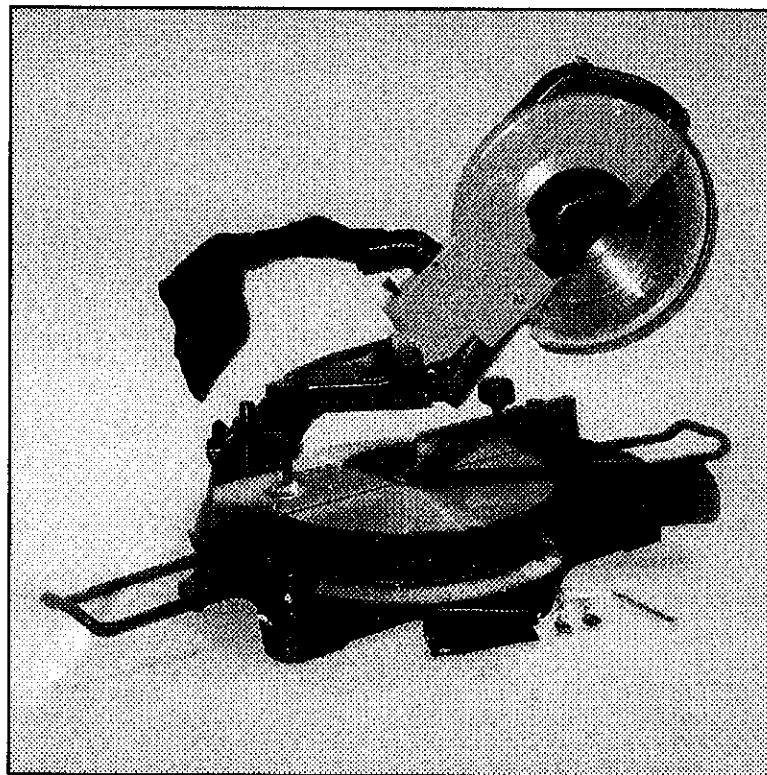


CHICAGO
Electric Power Tools

10" COMPOUND SLIDE MITER SAW

Model 41168

OPERATING INFORMATION



3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our Web site at <http://www.harborfreight.com>

Copyright © 2001 by Harbor Freight Tools. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.

For technical questions please call 1-800-444-3353

SPECIFICATIONS

ITEM	DESCRIPTION
Motor	1-3/4 HP/4,000 RPM/Double Insulated
Power Supply	110V/60Hz/Single Phase/10.8 Amps
Power Cord	14 GA UL Approved
Arbor Diameter	0.625"
Blade Diameter	10"
Cutting Capacity	5-3/8"
Overall Dimensions	25" x 21-1/4" x 19-3/4"
Accessories	10" x 40t C2 Carbide Tipped Blade Material Hold Down Clamp Material Support Brackets Stop Plate For Repeated Cuts Of Same Dimension Lug Style Arbor Wrench Dust Bag Spare Carbon Brushes

PRODUCT FEATURES

1. Powerful, precise saw makes accurate and repeatable compound angle cuts.
2. Electric blade brake stops blade in seconds for safe operation.
3. External access carbon brushes for convenient maintenance and replacement of motor brushes.
4. Dust bag to help keep work area clean and improve visibility of workpiece during cutting.
5. Precision machined table with graduated scale and pin presets.
6. Material vise assembly and support brackets improve cutting accuracy.
7. Transparent retractable blade guard improves safety while providing good visibility.

SAVE THIS MANUAL

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

1. **KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp or wet work areas invite injuries.
2. **KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product.
3. **STORE IDLE EQUIPMENT.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment and keep out of reach of children.
4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
5. **USE EYE, HEARING, AND BREATHING PROTECTION.** Wear ANSI approved safety impact eye glasses, ANSI approved hearing protection, and ANSI approved dust mask or respirator when using this product. ANSI approved safety impact eye glasses, hearing protection, and dust masks and respirators are available from Harbor Freight Tools.
6. **DRESS SAFELY.** Non-skid footwear or safety shoes should be used when working with this product. Do not wear loose clothing or jewelry as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.
7. **INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENTS.**
8. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
9. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
10. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
11. **REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.

12. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this tool clean and dry, and keep saw blades clean and sharp for better and safer performance.
13. **MAINTENANCE:** For your safety, service and maintenance should be performed regularly by a qualified technician.
14. **USE THE RIGHT PRODUCT FOR THE RIGHT JOB.** There are certain applications for which this product was designed. Do not use small equipment, tools or attachments to do the work of larger industrial equipment, tools or attachments. Do not use this product for a purpose for which it was not intended.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1. **GROUND THIS PRODUCT.** The electrical power cord for this tool is equipped with a 2-prong plug. Never modify the plug in any way. Do not use adapter plugs with this product. When in use, make sure this product is always plugged into a grounded electrical receptacle with an appropriate breaker switch in-line.
2. **MAKE SURE THE POWER SWITCH IS IN THE "OFF" POSITION BEFORE PLUGGING IN THE POWER CORD.**
3. **DO NOT ABUSE THE POWER CORD.** Do not use the cord to pull the 2-prong plug from a power outlet. Keep cord away from heat, oil, sharp edges, and moving parts. Replace damaged cord immediately. Route the power cord safely. Protect it from being damaged by other equipment in the shop. Do not route the cord where it can be walked on or tripped over.
4. **IF YOU USE AN EXTENSION CORD, MAKE SURE TO USE ONLY UL APPROVED CORDS HAVING THE CORRECT GAUGE AND LENGTH.**
(SEE FIGURE A.)

AMP RATING	Total Extension Cord Length in Feet							
	25	50	75	100	125	150	175	200
0-10	18	18	16	16	14	14	12	12
10.1-13	16	16	14	14	14	12	12	12
13.1-15	14	14	12	12	12	12	12	--

FIGURE A

5. **PLACE THE MITER SAW ON A FLAT, LEVEL, STURDY SURFACE CAPABLE OF SUPPORTING THE WEIGHT OF THE MITER SAW AND THE WEIGHT OF MATERIALS THAT WILL BE CUT.**

6. **MAINTAIN A SAFE WORK ENVIRONMENT.** Do not use this tool in or near damp or wet areas. Do not expose this tool to rain. Keep work area well lit. Make sure there is adequate surrounding work space. Use this product in a well ventilated area. Do not operate this product in the presence of flammable liquids, gases, or dust. To avoid accidental electric shock, do not let your body come in contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.
7. **DO NOT FORCE THE EQUIPMENT.** This tool will do the work better and safer at the speed and capacity for which it was designed.
8. **KEEP ALL GUARDS IN PLACE AND IN WORKING ORDER.**
9. **REMOVE ALL ADJUSTING WRENCHES FROM THE TOOL BEFORE TURNING ON THE MITER SAW.**
10. **MAKE SURE THAT WHEN INSTALLING THE SAW BLADE THE SAW TEETH POINT AWAY FROM YOUR BODY AND TOWARD THE REAR OF THE MITER SAW.**
11. **AVOID UNINTENTIONAL STARTING.** Make sure you are prepared to begin work before turning the START switch on.
12. **DO NOT USE THIS TOOL FOR CUTTING METALS OR BRITTLE MATERIALS.** Do not cut dangerous materials, such as asbestos which can cause harmful dust or vapors.
13. **CAUTION:** Some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic. When cutting these materials extra care should be taken to avoid inhalation and minimize skin contact.
14. **BEFORE USING THE MITER SAW, MAKE SURE THE SAW BLADE IS PROPERLY MOUNTED ON THE SAW SPINDLE.** Make sure the saw blade is balanced, and is not bent or cracked.
15. **ALLOW THE SAW BLADE TO SPIN UP TO FULL SPEED BEFORE FEEDING WOOD INTO IT.** When turning it off, allow the saw blade to spin down and stop on its own. Do not press against the saw blade to stop it.
16. **DO NOT FORCE THE SAW BLADE INTO THE MATERIAL BEING CUT.** Apply moderate pressure, allowing the saw blade to cut without being forced.
17. **NEVER ATTEMPT TO REMOVE MATERIAL STUCK IN THE MOVING PARTS OF THE MITER SAW WHILE THE SAW IS PLUGGED IN AND RUNNING.**
18. **THE SAW BLADE WILL BECOME HOT WHILE CUTTING.** Allow the saw blade to completely cool before touching.

19. **WHENEVER POSSIBLE, USE CLAMPS OR OTHER SAFE, PRACTICAL WAYS TO HOLD AND SUPPORT THE WORKPIECE.**
20. **ALWAYS DISCONNECT TOOL FROM ITS ELECTRICAL SUPPLY SOURCE BEFORE PERFORMING ANY SERVICES OR MAINTENANCE** such as leaving the work area, moving the tool from one location to another, changing the saw blade, cleaning sawdust from the unit, etcetera.

UNPACKING

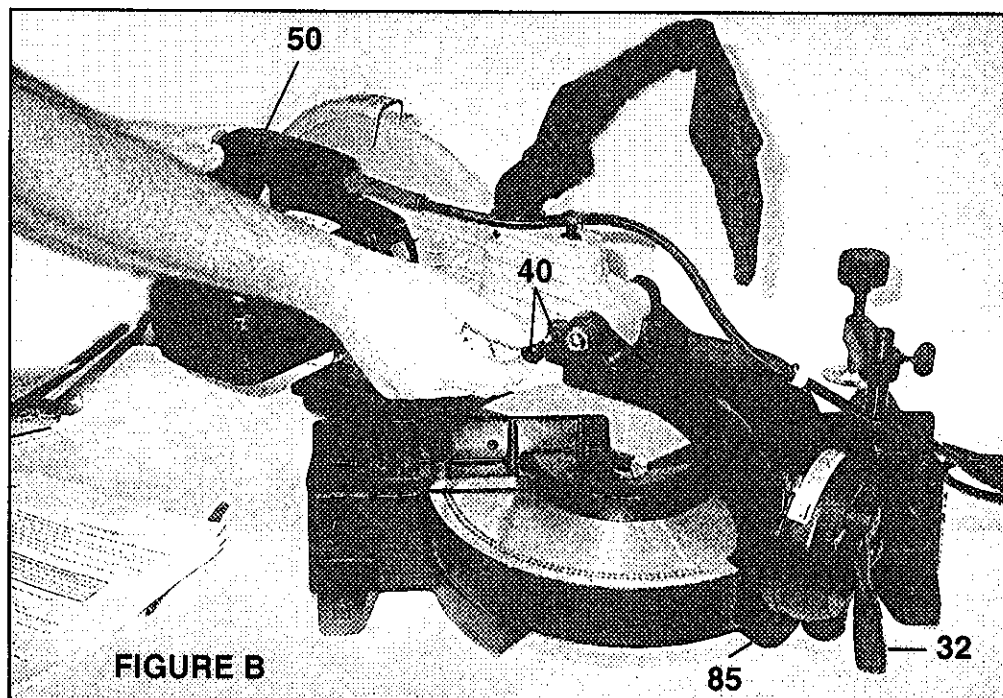
When unpacking, check to make sure all parts shown on the Parts List (pages 25, 26) are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

OPERATING INSTRUCTIONS

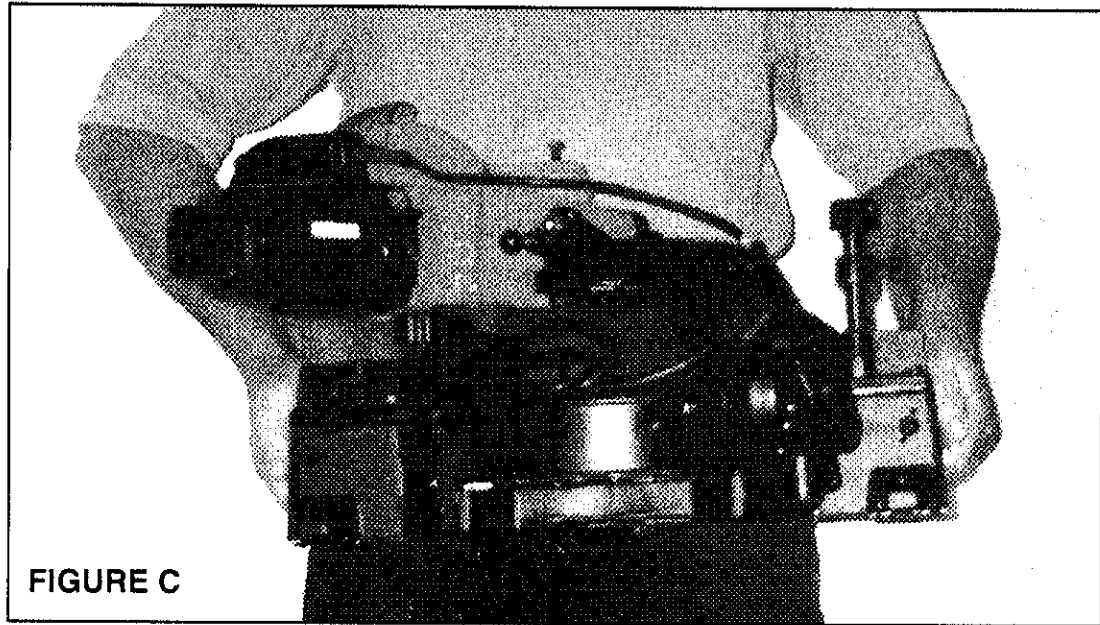
NOTE: All parts below refer to the parts listed on page 24-25 of this manual.

Transporting The Saw:

1. The Compound Miter Saw is portable, and can easily be moved to the worksite.
2. Unplug the Saw from the electrical power source.
3. Adjust the Bevel Lever (part #32) and lock the Saw in its vertical position. (See Figure B.)

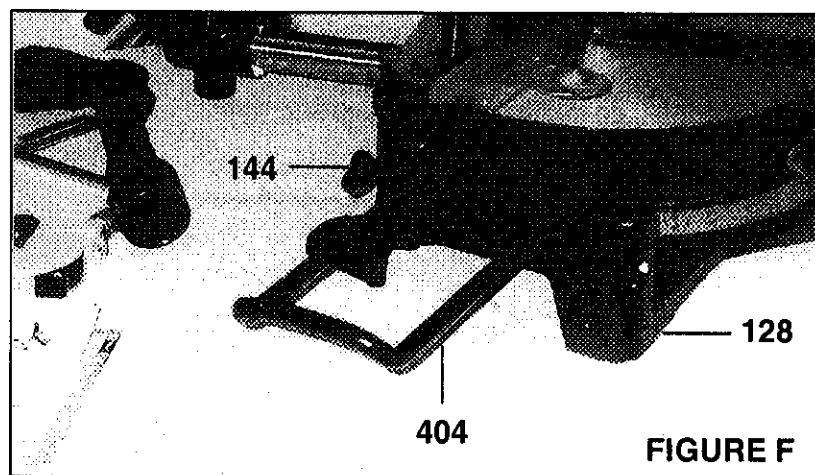
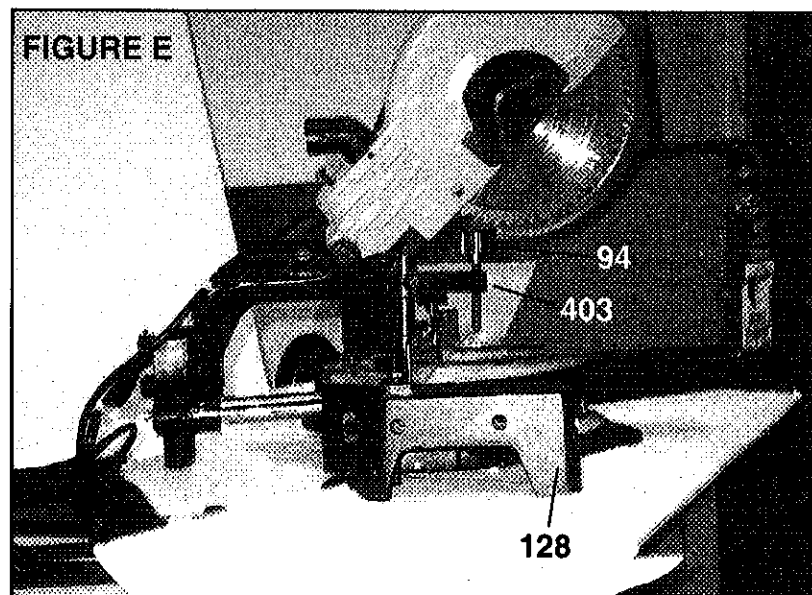
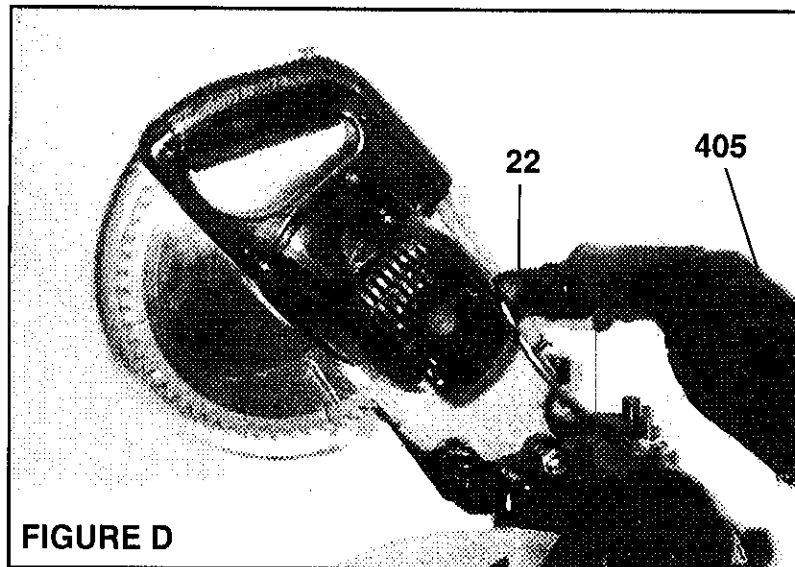


4. Lower the Saw Handle (part #50), and lock it in position with the Stopper Pin (part #40).
5. Wrap up the Power Cord.
6. Carry the Saw horizontally, holding it by the base with both hands. NOTE: Do not carry the Saw by its Handle (part #50), as this can cause damage to the unit. **(See Figure C)**



To Assemble The Accessories:

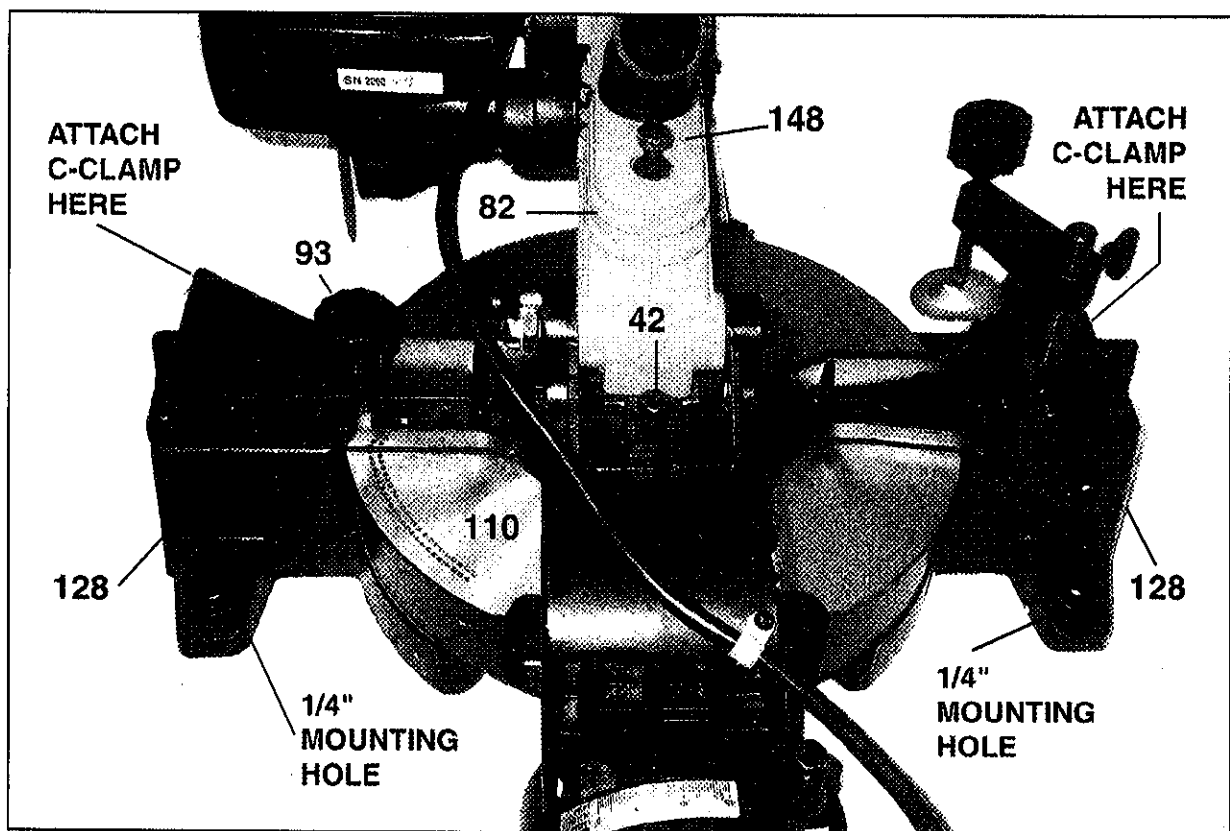
1. The Compound Miter Saw comes with several accessories you may wish to attach to the unit.
2. The Dust Bag Assembly (part #405) can be installed by inserting the bag opening onto the top of the Motor Housing Holder (part #22). **(See Figure D, page 8)**
3. The material Vise Assembly (part #403) can be inserted into the hole on either side of the Guide Fence (part #91), and locked in place with the Knob (part #94). **(See Figure E, page 8)**
4. The two material Holder Assemblies (part #404) may be inserted into the hole on both sides of the Saw Base (part #128) and locked in place with the Screw (part #144). **(See Figure F, page 8)**



To Mount The Compound Miter Saw:

1. When in use, the Saw should be securely mounted to a flat, level, sturdy table/workbench capable of supporting the weight of the Saw, accessories, and the material being cut.
2. Located on the rear side of the Saw Base (part #128) are two 1/4" mounting holes. Using the two mounting holes on the Saw Base as a template, mark the two 1/4" holes that are to be drilled through the table/workbench. Drill the holes and secure the Saw to the table/workbench, using two 1/4" bolts, lock washers, and nuts (not provided). **(See Figure G.)**
3. Use two C-clamps (not provided) to secure the front side of the Saw Base (part #128) to the table/workbench.

FIGURE G



To Install The Saw Blade:

1. Make sure to use a 10" blade made for a 0.625" Spindle (part #68), suited for the type of material being cut.
2. *Make sure the Saw is unplugged from its electrical power source.*

3. Lift up and hold the transparent Safety Cover (part #73) in place. **(See Figure H.)**
4. Using the Socket Wrench (part #401), remove the Hex Flange Head Bolt (part #79) which is located on the Center Cover (part #80).
5. Using an Allen Wrench (not provided), remove the Screw (part #75) and Ring (part #74) which are located on the Center Cover (part #80).
6. Press in and hold the Shaft Lock (part #1) to keep the Spindle (part #68) from turning. **(See Figure I.)**

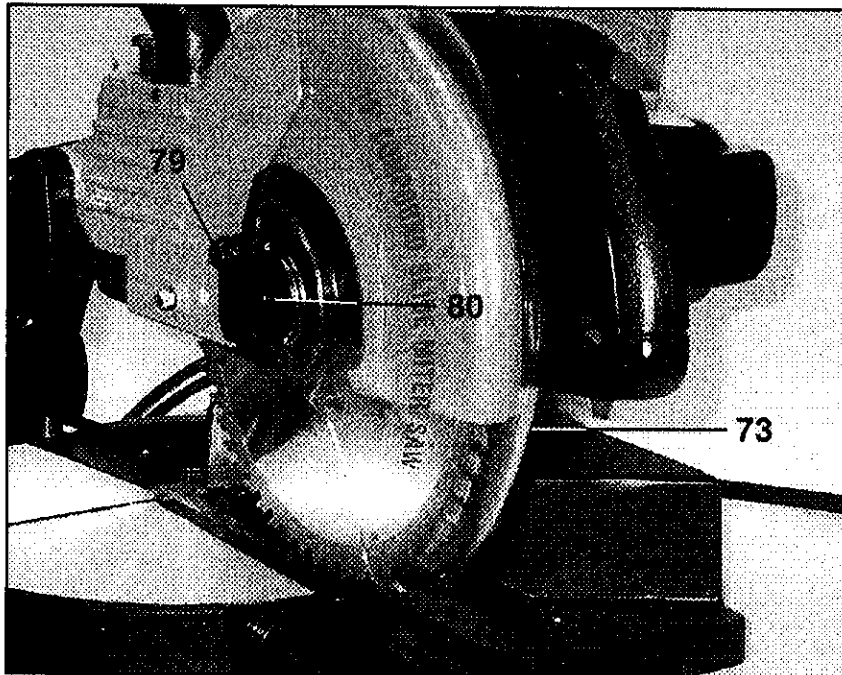


FIGURE H



FIGURE I

7. Using the Socket Wrench (part #401), remove the Hex Flange Head/Spindle Bolt (part #72) and the *Outer Flange* (part #71) which are located on the Spindle (part #68). NOTE: To remove the Hex Flange Head/Spindle Bolt (part #72), turn it **CLOCKWISE**. **(See Figure J.)**

8. Mount the Saw Blade on the Spindle (part #68), making sure the arrow direction on the Saw Blade matches the arrow on the Blade Case (part #82). In other words, the blades of the saw should point toward the *rear* of the Saw. (See Figure K.)
9. Insert the Outer Flange (part #71) onto the Spindle (part #68) and against the Saw Blade. NOTE: Make sure the larger diameter side of the Outer Flange is against the Saw Blade. (See Figure L.)

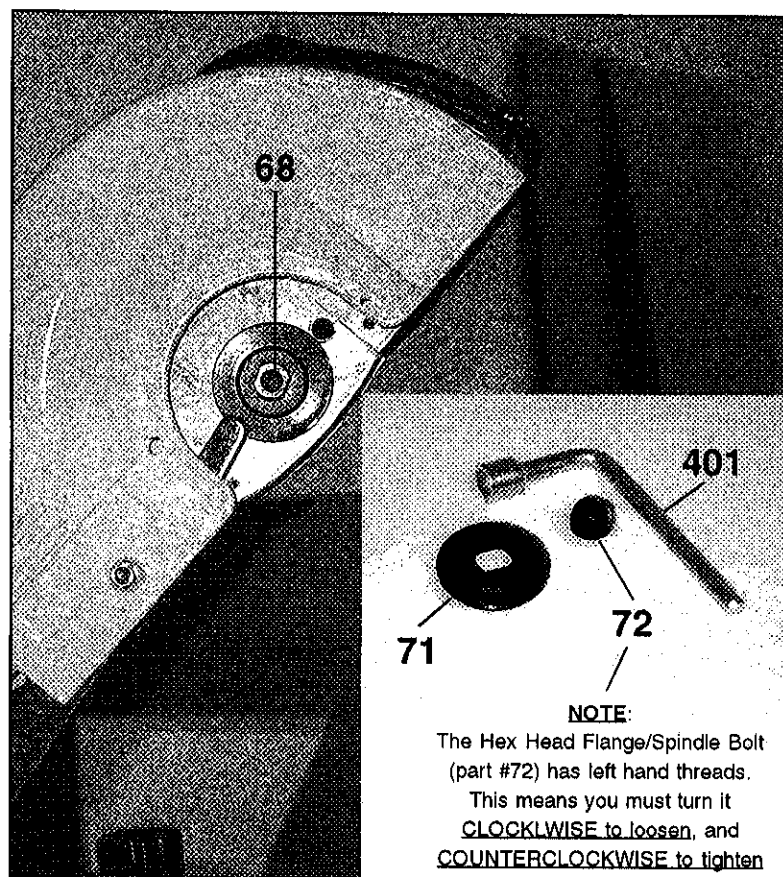
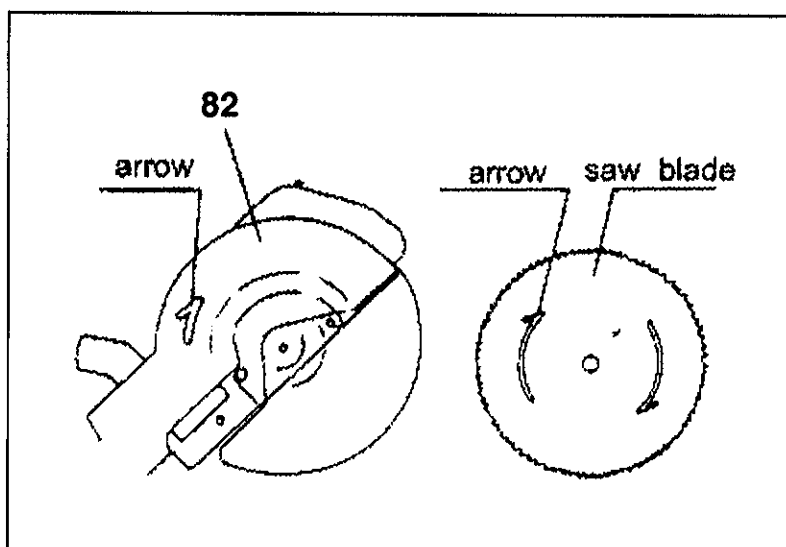


FIGURE J

FIGURE K



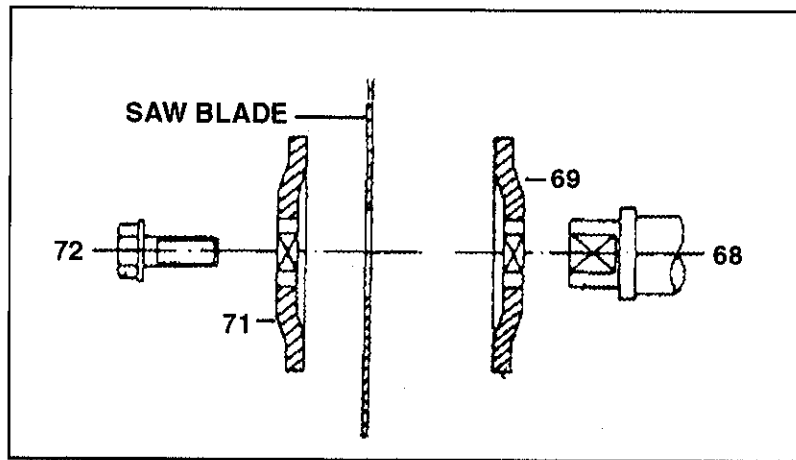


FIGURE L

10. Press in and hold the Shaft Lock (part #1). Use the Socket Wrench (part #401) to firmly tighten the Hex Flange Head/Spindle Bolt (part #72) onto the Spindle (part #68) by turning it COUNTERCLOCKWISE.
11. Replace the Center Cover (part #80) and allow the transparent Safety Cover (part #73) to return to its normal downward position.
12. Make sure the Saw Blade does not touch any part of the Turn Base (part 110) of the Saw. (See *Kerf Plate Adjustment* section (page 14) for more information.)

The Safety Blade Cover:

1. The transparent Safety Cover (part #73) automatically rotates to cover the Saw Blade when the Handle (part #50) is lifted. When the Handle is lowered, the Safety Cover rotates back out of the way.
2. Do not disconnect or remove the Safety Cover (part #73). Do not operate the Saw if the Safety Cover is damaged or missing.
3. If the transparent Safety Cover (part #73) becomes so dirty that the Saw Blade cannot be seen clearly, disconnect the electrical power cord from the power source and clean the Safety Cover with a soft, damp cloth. A mild detergent may be used, but do not use solvents which may damage the Safety Cover.

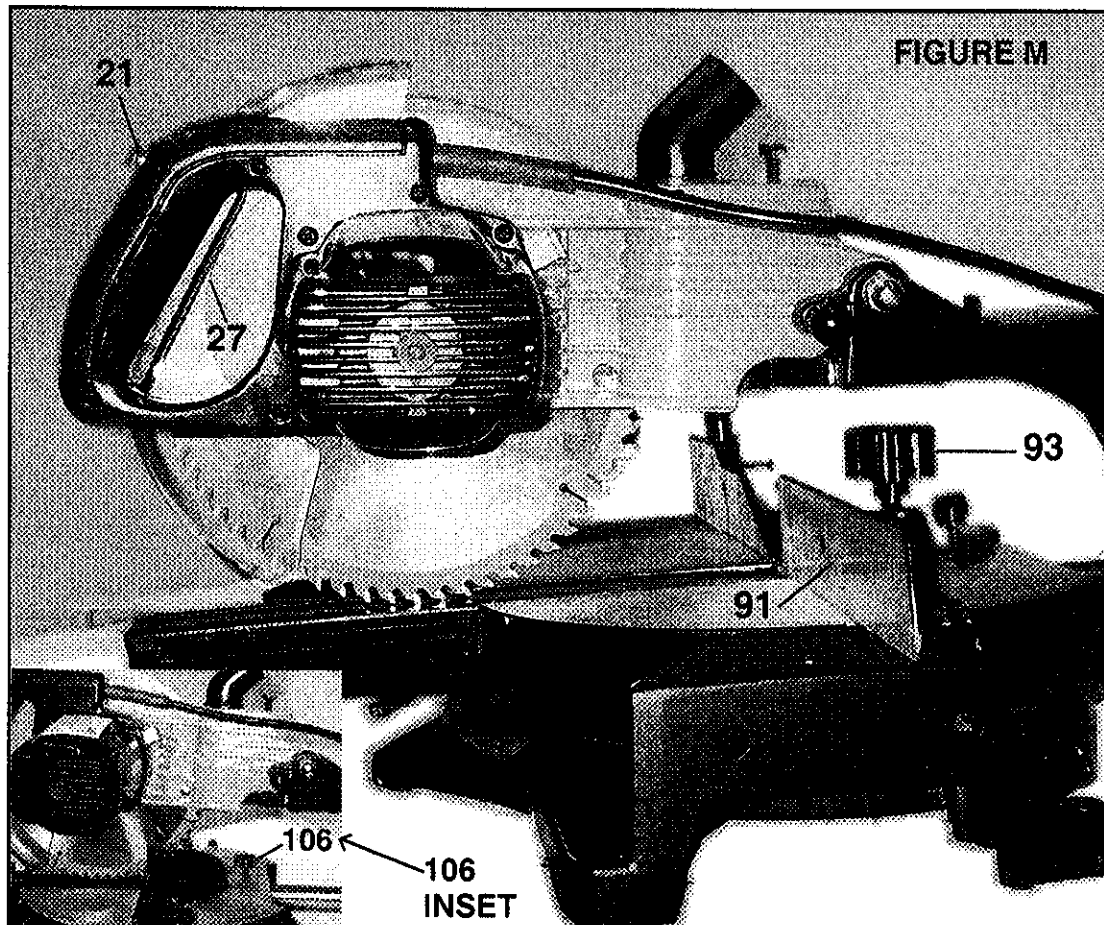
The Dust Bag Assembly:

1. The Dust Bag Assembly (part #405) helps keep the work area clean by catching sawdust and wood chips which are thrown off by the Saw Blade.
2. When the Dust Bag Assembly (part #405) is half full, remove it from the Saw, and empty it by using the zippered opening in the bottom of the bag.

3. For more efficient sawdust collection, the hose from a shop vacuum (not provided) may be attached onto the top of the Motor Housing Holder (part #22).

The Power Switch:

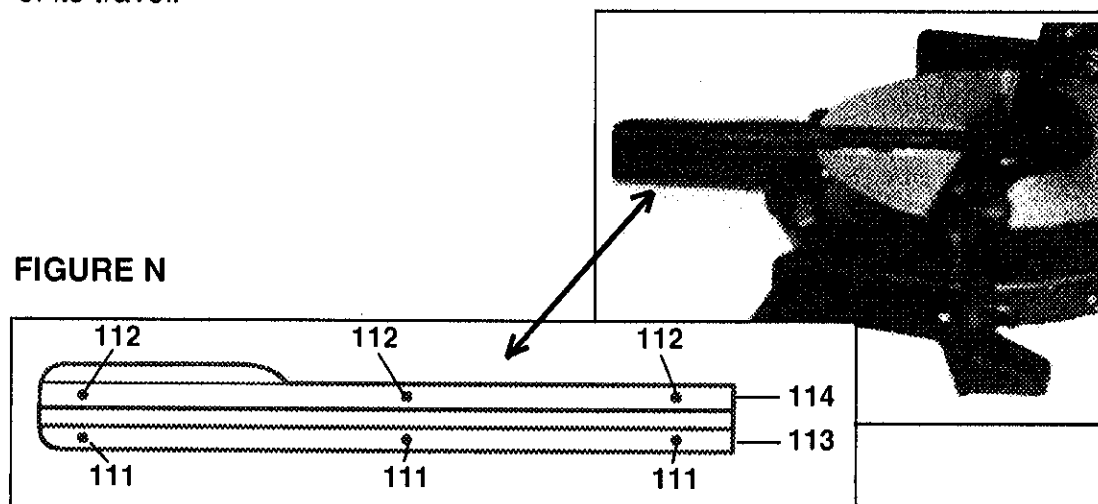
1. NOTE: The Saw can be disabled for safety purposes by removing the Switch Lock Button (part #21). Be sure to store the Switch Lock Button in a safe place and do not lose it. **(See Assembly Drawing.)**
2. Before plugging in the Saw, check the operation of the Switch Lever (part #27) and Switch Lock Button (part #21) mechanisms. **(See Figure M.)**
3. To operate the Saw, depress the Switch Lock Button (part #21) with your thumb and squeeze the Switch Lever (part #27) on the Handle (part #50).



4. To turn off the Saw, release the Switch Lever (part #27). This allows the Switch Lock Button (part #21) to return to the "OFF" position.
5. Do not force the Switch Lever (part #27) if the Switch Lock Button (part #21) is not present. This will damage the Switch Lever mechanism.

The Kerf Plate Adjustment:

1. The Right and Left Kerf Plates (parts #113, 114) can be adjusted for the width of the Saw Blade being used. **(See Figure N.)**
2. Make sure the Saw is unplugged from its electrical power source before making this adjustment.
3. After installing the new Saw Blade, loosen all three Screws (part #111) on the Right Kerf (part #113) and all three screws (part #112) on the Left Kerf (part #114) enough to allow the Kerf Plates to be adjusted by hand.
4. With the Saw in its vertical position, pull the Saw toward you, extending it to the end of its travel.



5. Move the near ends of the Kerf Plates as close to the Saw Blade as possible, without touching the Saw Teeth.
6. Push the Saw as far forward as possible, and adjust the far ends of the Kerf Plates as close to the Saw Teeth as possible without touching them.
7. Tighten the six Screws (parts #111, 112) on the Kerf Plates (parts #113, 114).
8. Check your adjustment. Readjust if necessary.

9. **NOTE:** When making compound cuts with the Saw rotated out of vertical alignment, the Kerf Plates (parts #113, 114) may need to be re-adjusted. **(See Figure O.)**

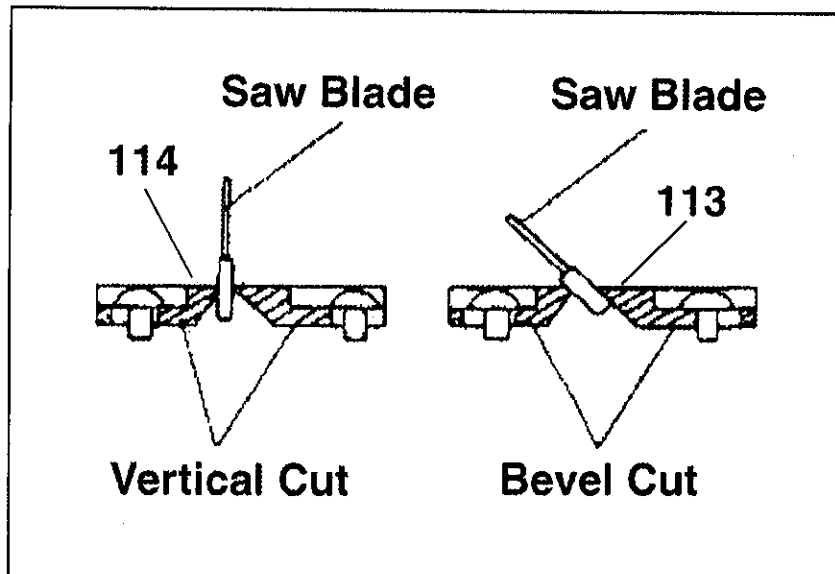


FIGURE O

To Adjust The Cutting Depth:

1. The cutting depth can be adjusted to accommodate Saw Blades of slightly smaller diameter and to assure that the workpiece is cut completely through.
2. Make sure the Saw is unplugged from its electrical power source before making this adjustment.
3. Push the Saw forward as far as it will go. Notice whether the edge of the Saw Blade passes completely through the Kerf Plates (parts #113, 114).
4. If the Saw Blade does not pass completely through the Kerf Plates (parts #113, 114), lower the Saw Blade slightly by turning the Hex Socket Bolt (part #148) located on top of the Blade Case (part #82) **COUNTERCLOCKWISE**. **(See Figure G.)**
5. After adjusting the Hex Socket Bolt (part #148), press down on the Saw and make sure that the Saw Blade does not contact the bottom of the Turn Base (part 110) or any other part of the Saw Base (part #128).
6. If the Saw Blade touches, turn the Hex Socket Bolt (part #148) **CLOCKWISE** to raise the Saw Blade slightly until it clears.

To Adjust The Miter Angle:

1. Lift the Saw Handle (part #50) up.
2. Loosen the Screw (part #93) on the Guide Fence (part #91). **(See Figure M.)**

3. Rotate the Turn Base (part #110) to the desired angle.
4. Retighten the two Screws (part #93) on the Guide Fence (part #91).
5. Lower the Saw Blade and check the angle with a triangle or protractor. (Compare the angle of the Saw Blade to the Guide Fence (part #91).)

To Adjust The Bevel Angle:

1. The Saw Blade can rotate up to 45 degrees to the *left*.
2. Loosen the Bevel Lever (part #32) on the back of the Saw. **(See Figure B.)**
3. Rotate the Saw to the desired angle, and retighten the Bevel Lever (part #32).
4. Unplug the Saw from its electrical power source, and check to make sure the Saw Blade does not contact any part of the Turn Base (part #110).
5. **NOTE:** You may have to readjust the Kerf Plates (parts #113, 114) before using the Saw in a beveled position.

To Secure The Workpiece Onto The Saw Turn Base:

1. **WARNING:** You must secure the workpiece firmly to the Saw Turn Base (part #110) before cutting. A loose workpiece may fly off or become jammed in the Saw, potentially causing serious personal or property injury.
2. Mount the Vise Assembly (part #403) on one side of the Guide Fence (part #91), and insert the post of the Vise Assembly into the hole on either side of the Guide Fence. **(See Figure E.)**
3. Insert a sample piece of the workpiece to determine its thickness, and adjust the Vise Assembly (part #403) for the best fit.
4. Tighten the Vise Assembly in position, using the Screw (part #99).
5. Check to make sure the Vise Assembly does not interfere with the movement of the Saw by moving the Saw to all extremes of its range. Move or re-adjust the Vise Assembly if necessary.
6. Remove the sample workpiece, and place the actual workpiece on the Turn Base (part #110) against the Guide Fence (part #91).
7. Secure the workpiece in place by tightening the Knob (part #94) on the Vise Assembly (part #403).

8. **NOTE:** Make sure to use the Holder Assembly (part #404) when cutting a long piece of material.

To Use The Holder Assembly And Set Plate:

1. The two Holder Assemblies (part #404) can be installed by inserting their two rod ends into holes located in the sides of the Saw Base (part #128) and tightening the Screws (part #144). (See Figures E, F, and P)
2. The bends in the Holder Assembly rods should be turned up to provide a support which is level with the Turn Base (part #110).
3. When cutting very long pieces of material you will need to arrange additional material supports.
4. For repeated cuts of the same length, use the Set Plate (part #142). The Set Plate allows you to measure only once, but cut many times.

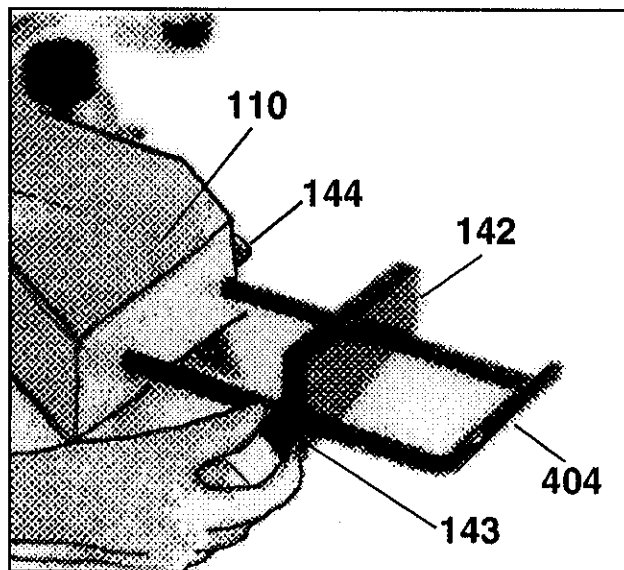


FIGURE P

5. Slide the Set Plate (part #142) onto one of the Holder Assemblies (part #404).
6. With the Saw off and unplugged, measure from the Saw Blade to the Set Plate (part #142).
7. Slide the Set Plate to the desired distance from the Saw Blade, and lock the Set Plate in position with the Screw (part #143).
8. **NOTE:** Make sure the Screws (part #144) which secure the Holder Assembly (part #404) in place are *tight* to keep the Holder Assembly from moving.

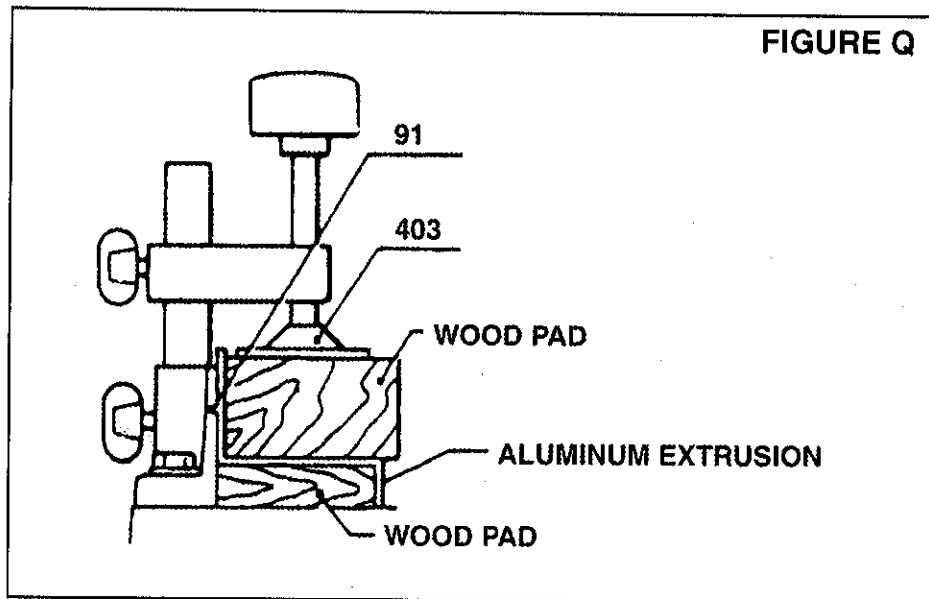
To Make A Basic Cut:

1. **WARNING:** Before plugging in and turning on the Saw make sure you have observed all safety warnings and precautions, and that it is safe to begin cutting.
2. Release the Stopper Pin (part #40) Pull the Saw Handle (part #50) down.
(See Figure B.)
3. Before turning on the Saw, check to make sure the Saw Blade will not contact any part of the Turn Base (part #110).
4. Pull the Saw back far enough that the Saw Blade will initially contact the upper rear corner of the workpiece.
5. Press the Lock Off Switch Button (part #21), and squeeze the Switch Lever (part #27) to power the Saw. Allow the Saw Blade to reach its maximum speed before starting the cut. **(See Figure M.)**
6. Lower the Saw Blade into the workpiece, pressing gently down. Do not force the tool. Allow the Saw Blade to do its work as you feed the Saw into the workpiece.
7. As the Saw reaches the lower part of its swing, pull the Saw forward to continue cutting across the workpiece. Continue pulling the Saw forward until the cut is completed. Do not stop midway in the cut.
8. When the cut is completed, release the Switch Lever (part #27) and Lock Off Switch Button (part #21). Wait for the Saw Blade to stop turning before raising the Saw Handle (part #50) to its upward position.
9. Remove the cut workpiece from the Saw.

Caution: The wood to be cut needs to be positioned under the center of the saw blade. If you are cutting a small workpiece, use a spacer block to move the wood to be cut so that you are cutting lined up with the center of the blade.

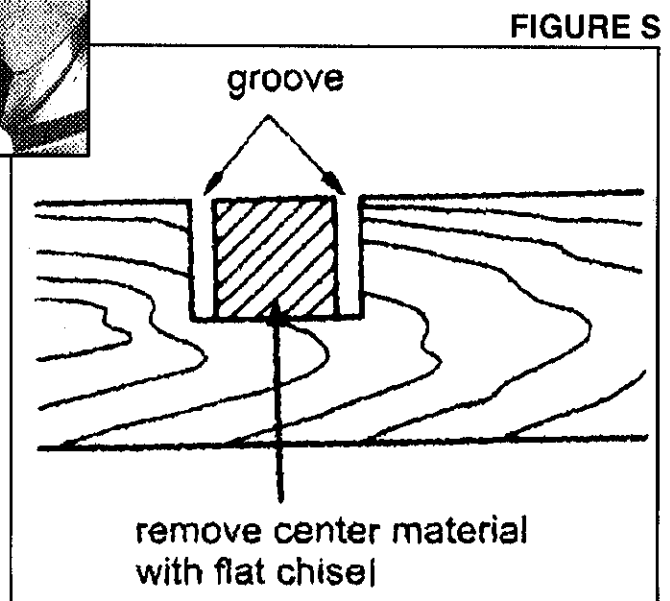
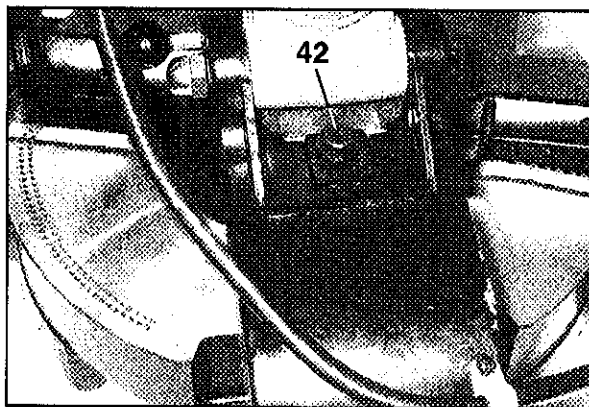
To Use A Wood Pad:

1. In some cases it can be useful to mount a wood pad against the Guide Fence (part #91) or under the workpiece. **(See Figure Q, page 19)**
2. A thin strip of flat wood can be mounted to the Guide Fence (part #91), using screws (not provided) through the wood pad, with nuts (not provided) on the backside of the Guide Fence. **NOTE:** Be sure to countersink the screw heads.
3. When cutting odd shaped pieces, such as aluminum extrusions, wood pads of the correct size can support the extrusion while cutting.



To Cut A Groove:

1. The cutting depth of the Saw can be adjusted, using the Stopper Plate (part #42).
(See Figures G, R, and S.)
2. Unplug the Saw from its electrical power source.
3. Loosen the Hex Head Flange Bolt (part #43) which is located on the Stopper Plate (part #42).



4. Adjust the Stopper Plate (part #42) until the desired cutting depth is obtained. You may need to make repeated adjustments, measuring the distance from the lowered Saw Blade to the Turn Base (part #110) until the desired depth is reached.
5. Retighten the Hex Head Flange Bolt (part #43) firmly.
6. **NOTE:** Remember to readjust the Stopper Plate (part #42) before returning to standard cuts.

To Adjust The Mitered Cutting Angle:

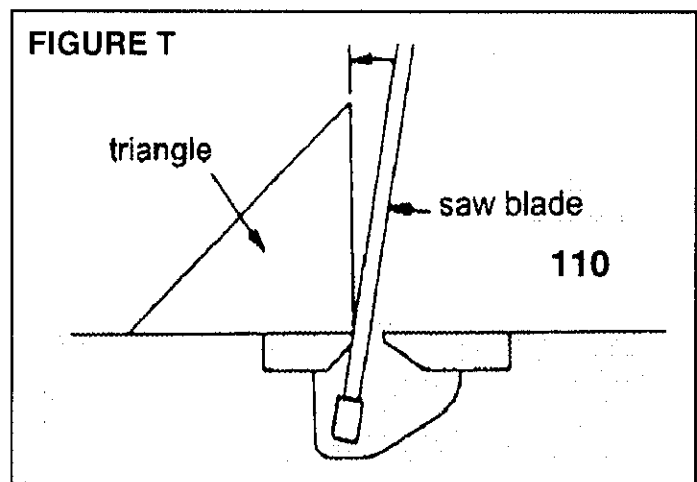
1. Unplug the Saw from its electrical power source.
2. Push the Saw all the way forward, and tighten the Screw (part #106) to prevent the Saw from sliding. **(See Figure M)**
3. Loosen the Screw (part #93) in the Guide Fence (part #91) to allow the Turn Base (part #110) to move. **(See Figures G and M.)**
4. Turn the Turn Base (part #110) so that the Needle on the Scale points to 0 degrees. then, move the Turn Base slightly to each side to allow the Turn Base to seat into the groove.
5. Loosen the four Hex Bolts (part #102) holding the Guide Fence (part #91) in position.
6. Lower the Saw all the way down and lock it in place, using the Stopper Pin (part #40).
7. Align the Guide Fence (part #91) perpendicular (at a 90 degree angle) to the Saw Blade with the use of a carpenter's square or right angle.
8. Tighten the four Hex Bolts (part #102) on the Guide Fence (part #91) firmly in position.
9. Check to see if the Needle on the Turn Base Scale points to 0 degrees. If not, loosen the four Hex Bolts (part #102) and readjust.

To Adjust The Bevel Cut Guide:

1. To adjust the 0 degree setting on the Bevel Indication Plate (part #36), push the Saw all the way forward toward the Guide Fence (part #91). Then, tighten the Screw (part #106) to prevent the Saw from sliding **(See Figure M).**
2. Lower the Saw all the way down and lock it in place, using the Stopper Pin (part #40). **(See Figure B.)**

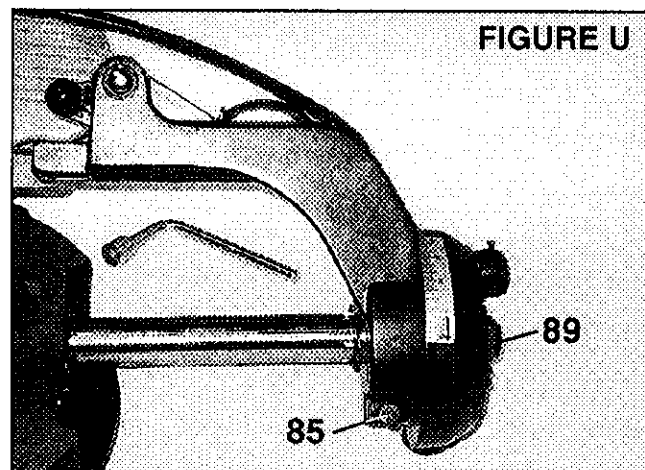
3. Loosen the Bevel Lever (part #32) at the back of the Saw. **(See Figure B.)**
4. Turn the Hex Bolt (part #85) at the bottom of the Arm Holder (part #87) *three turns counterclockwise*, and let the Saw lay over to the right. **(See Figure U.)**
5. Turn the Hex Bolt (part #85) *clockwise* while moving the Arm Holder (part #87) toward the vertical position.
6. Use a carpenter's square or draftsman's triangle to adjust the Saw Blade to the exact vertical position, perpendicular to the surface of the Turn Base (part #110). **(See Figure T)**
7. Retighten the Bevel Lever (part #32) firmly.
8. Check to see if the Needle on the Indication Plate (part #36) points to 0 degrees.
9. If not, loosen the Pan Head Screw (part #37), adjust the Needle, and retighten the Pan Head Screw.

10. **To adjust the 45 degree angle on the Bevel Indication Plate (part #36)**, push the Saw all the way forward toward the Guide Fence (part #91). Then, tighten the Screw (part #106) to prevent the Saw from sliding. **(See Figure M.)**



11. Lower the Saw all the way down and lock it in place, using the Stopper Pin (part #40). **(See Figure B.)**

12. Loosen the Bevel Lever (part #32) at the back of the Saw, and let the Saw lay over completely to the left. **(See Figure B.)**



13. Confirm that the Needle on the Arm Holder Plate (part #147) points to 45 degrees. If not, turn the Hex Bolt (part #85) at the bottom of the Arm Holder (part #87) until the Needle points to 45 degrees. **(See Figure U.)**

To Adjust The Handle:

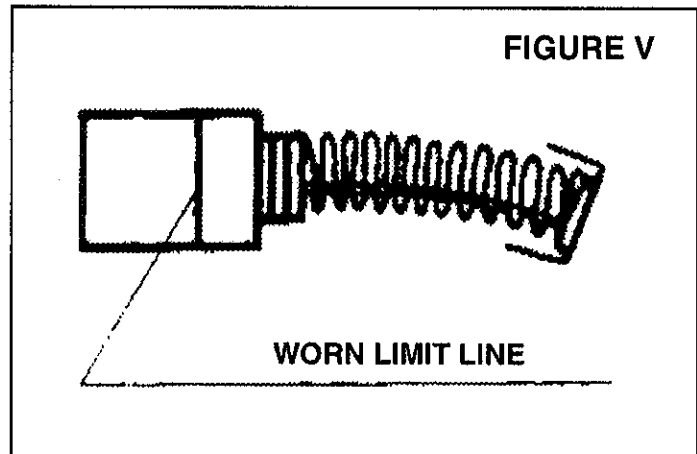
1. If the Hex Bolt that attaches the Blade Case (part #82) and Arm (part #39) is loose, hold the Lock Nut with one wrench, and tighten the Hex Bolt with another wrench.
2. After tightening the Hex Bolt, make sure the Handle (part #50) can return to its resting position from any other position. If the Hex Bolt is too loose, the cutting precision will be impaired. If the Hex Bolt is too tight, it will be difficult to move the Handle.

To Adjust The Bevel Axle:

1. If the Bevel Axle has become loose, the Hex Nut (part #89) should be tightened. **(See Figure U, page 21)**
2. Tighten the Hex Nut (part #89) just enough to remove the free play from the Bevel Axle, but not so much as to bind the Bevel Axle. *Do not overtighten.*

To Inspect And Replace The Carbon Brushes:

1. The two Carbon Brushes (part #18) are located on both sides of the Motor Housing (part #22). **(See Figure V.)**
2. **WARNING:** Before accessing the Carbon Brushes (part #18), make sure the Saw is unplugged from its electrical supply source.
3. Periodically remove the Brush Holder Caps (part #19) with a screwdriver to inspect the Carbon Brushes (part #18).
4. The Carbon Brushes have wear limit markings on them. You may safely use the Carbon Brushes up to the wear limit. When they have worn up to the limit they must be replaced. *Do not operate the Saw if the brushes are worn beyond the limit, as damage to the Saw may result.*
5. The Carbon Brushes must be replaced in pairs. For proper operation, the brushes must wear approximately equal.
6. If the Carbon Brushes are dirty, carefully scrape or wipe them off. **NOTE:** The



Carbon Brushes are made of carbon and have the approximate strength as pencil lead. Do not overstress the Carbon Brushes while cleaning or they may break.

7. When installing, make sure the Carbon Brushes fit neatly into their holders, and that the springs operate freely.
8. Make sure the carbon portion of the Carbon Brushes contact the Motor Armature, and that the springs face away from the Motor.
9. After inspection or replacement, replace the Brush Holder Caps (part #19) with a screwdriver, and tighten firmly.

CLEANING, INSPECTION, AND MAINTENANCE

1. **Caution:** Always disconnect this Compound Miter Saw from its electrical power supply source before performing any cleaning, inspection, or maintenance.
2. Do not introduce water into the electric motor through the motor vents.
3. Do not use solvents to wipe off the Saw, as damage may result.
4. With a brush or soft cloth, remove all the sawdust from the saw.
5. If necessary, wipe with a damp cloth. You may use a mild detergent.
6. Once clean, lubricate all moving parts with a light oil.
7. When storing, keep the Compound Miter Saw in a box, or cover with a cloth cover.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

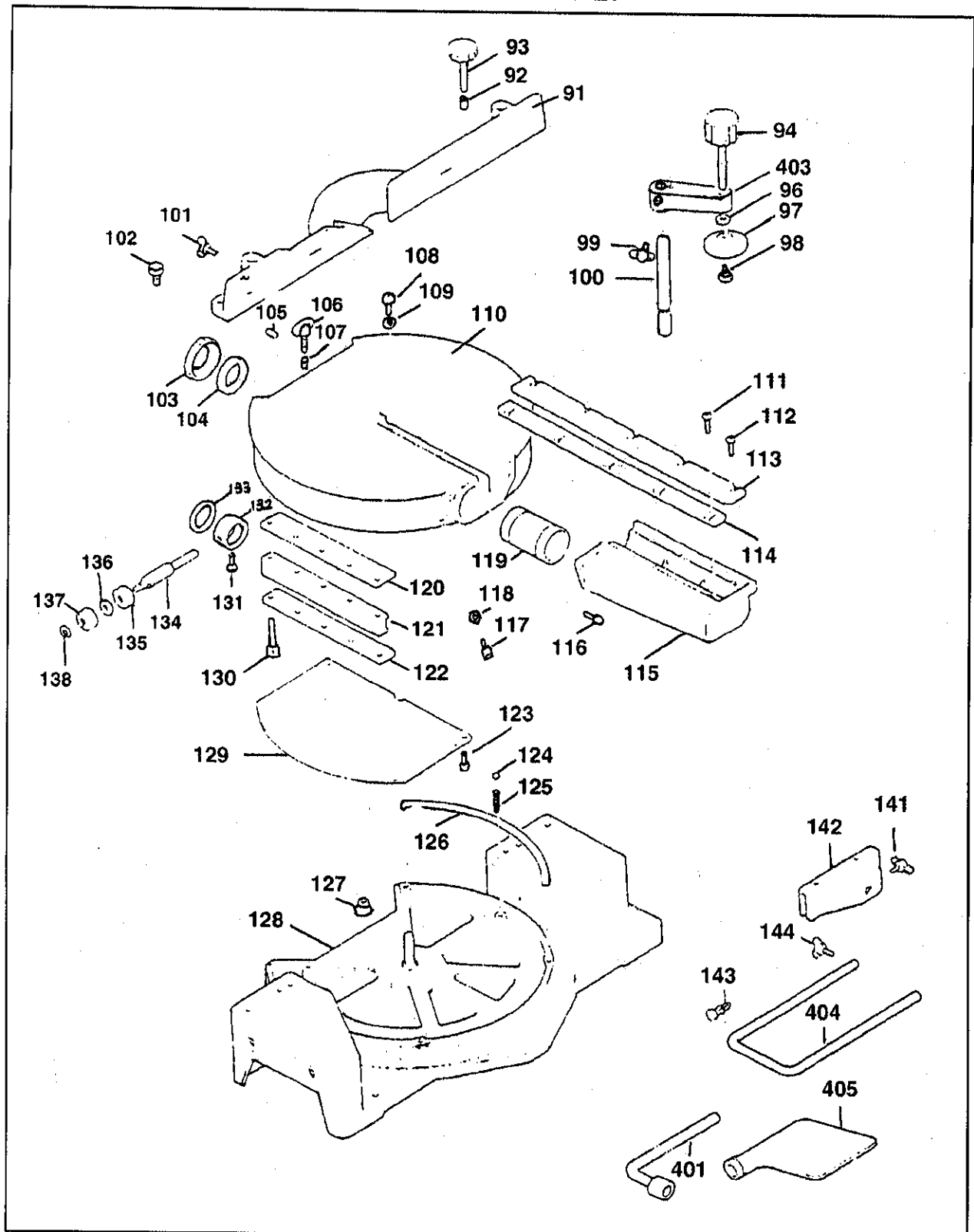
P/N	DESCRIPTION	QTY	P/N	DESCRIPTION	QTY	P/N	DESCRIPTION	QTY
1	Shaft Lock	1	57	Hex Socket Bolt m6x20	1	107	Pin	1
2	Ball Bearing	1	58	Hex Bolt	1	108	Pan Head Screw	1
3	Fan	1	59	Pan Head Screw	2	109	Flat Washer	1
4	Armature Assembly	1	60	Woodruff Key	1	110	Turn Base Complete	1
5	Insulation Washer	1	61	Hex Bolt	1	111	Screw	3
6	Ball Bearing	1	62	Link Plate	1	112	Screw	3
7	Urethane Washer	1	63	Gear Housing Complete	1	113	Kerf Board, right	1
8	Fan Guide	1	64	Retaining Ring	1	114	Kerf Board, left	1
9	Field Assembly	1	65	Helical Gear	1	115	Front Cover	1
10	Pan Head Screw m4x16	4	66	Bearing Box	1	116	Pan Head Screw	2
11	Strain Relief	2	67	Ball Bearing	1	117	Pan Head Screw	1
12	Cord Guard	1	68	Spindle	1	118	Indication Plate	1
13	Power Supply Cord	1	69	Flange	1	119	Linear Ball Bearing	1
16	Pan Head Screw	4	71	Flange	1	120	Slide Guide Plate	1
18	Carbon Brush	2	72	Hex Flange Head Bolt	1	121	Slide Guide Support	1
19	Brush Holder Cap	2	73	Safety Cover	1	122	Slide Guide	1
21	Lock Off Switch Button	1	74	Ring	1	123	Hex Socket Head Bolt	3
22	Motor Housing Holder	1	75	Screw	1	124	Steel Ball	1
23	Switch	1	76	Flat Washer	1	125	Compression Spring	1
24	Lock Off Lever	1	77	Pan Head Screw	1	126	Slide Plate	3
25	Cam	1	78	Torsion Spring	1	127	Cap	2
26	Compression Spring	1	79	Hex Flange Head Bolt	1	128	Base Complete	1
27	Switch Lever	1	80	Center Cover	1	129	Under Cover Complete	1
28	Pan Head Screw	2	81	Center Plate	1	130	Hex Socket Head Bolt	5
29	Rubber Pin	1	82	Blade Case Complete	1	131	Hex Socket Head Bolt	1

PARTS LIST

P/N	DESCRIPTION	QTY	P/N	DESCRIPTION	QTY	P/N	DESCRIPTION	QTY
30	Rubber Pin	1	83	O Ring	1	132	Lock Ring	1
31	Compression Spring	1	84	Elbow	1	133	Rubber Washer	1
32	Lever	1	85	Hex Bolt	1	134	Rod	1
33	Lock Bolt	1	86	Flat Washer	1	135	Needle	1
34	Flat Washer	1	87	Arm Holder Complete	1	136	Flat Washer	1
35	Pan Head Screw	1	88	Flat Washer	1	137	Needle	1
36	Indication Plate	1	89	Hex Nut	1	138	Stop Ring	1
37	Pan Head Screw	1	90	Pan Head Screw	1	139	Leaf Spring	1
38	Strain Relief	1	91	Guide Fence	1	140	Pan Head Screw	1
39	Arm Complete	1	92	Nylon Pin	1	141	Hex Bolt	1
40	Stopper Pin	1	93	Screw	1	142	Set Plate	1
41	O Ring	1	94	Knob	1	143	Screw	1
42	Stopper Plate	1	96	Flat Washer	1	144	Screw	2
43	Hex Flange Head Bolt	1	97	Vise Plate	1	145	Rubber Cushion	1
44	Compression Spring	1	98	Pan Head Screw	1	146	Screw	1
45	Spring Holder	1	99	Screw	1	147	Arm Holder Plate	1
46	Pin	1	100	Vise Rod	1	148	Hex Socket Bolt	1
47	Hex Lock Nut	1	101	Screw	1	149	Rubber Sleeve	1
48	Flat Washer	1	102	Hex Bolt	4	150	Fastener	1
49	Pipe	1	103	Cap	1	153	Insulated Receptacle	1
50	Handle	1	104	Felt Ring	1	401	Socket Wrench	1
54	Ring	1	105	Rubber Pin	1	403	Vise Assembly	1
55	Ring	1	106	Screw	1	404	Holder Assembly	1
56	Flat Washer	1				405	Dust Bag Assembly	1

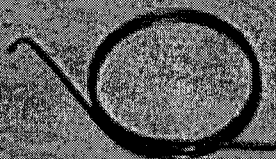
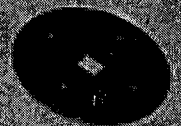
[illegible]

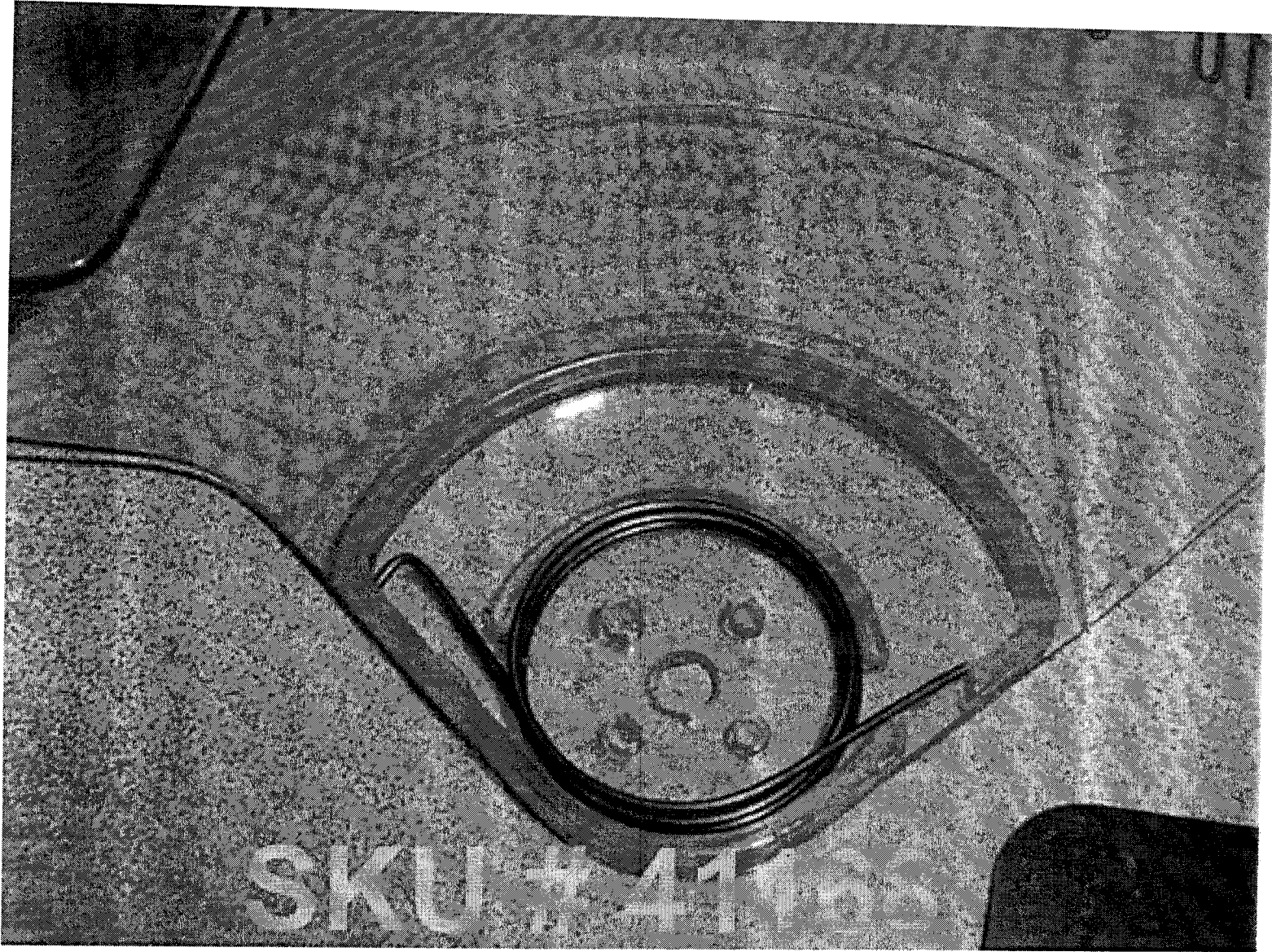
PARTS ASSEMBLY



NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

SKU # 41168

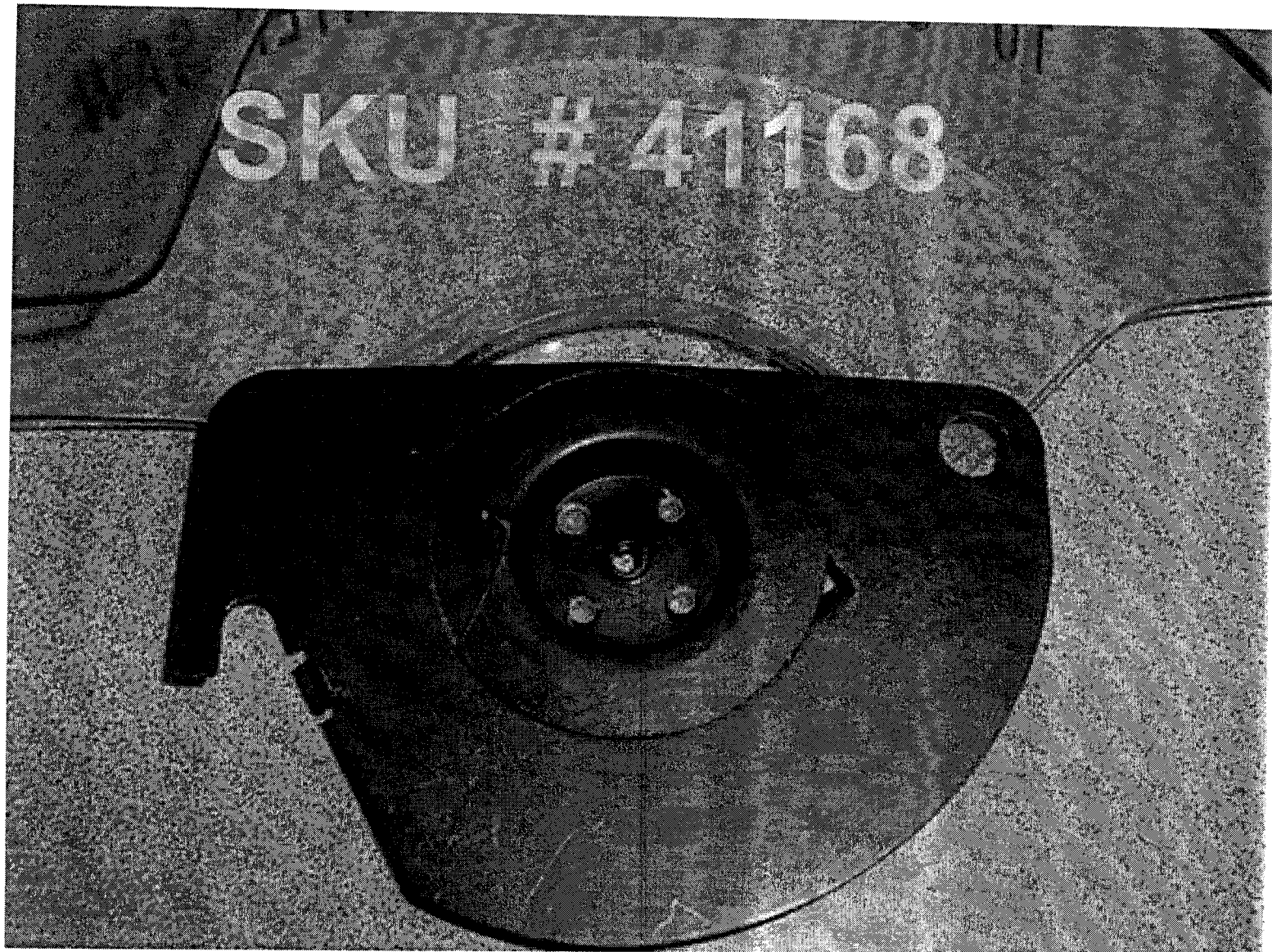




Install spring as shown (no tension).



Place "Center Cover" on spring as shown



Place "Center Plate" on "Center Cover" as shown.
"Center Plate" only goes on one way.

SKU # 41168



Turn guard over, holding pieces in place and
install washer and screw.

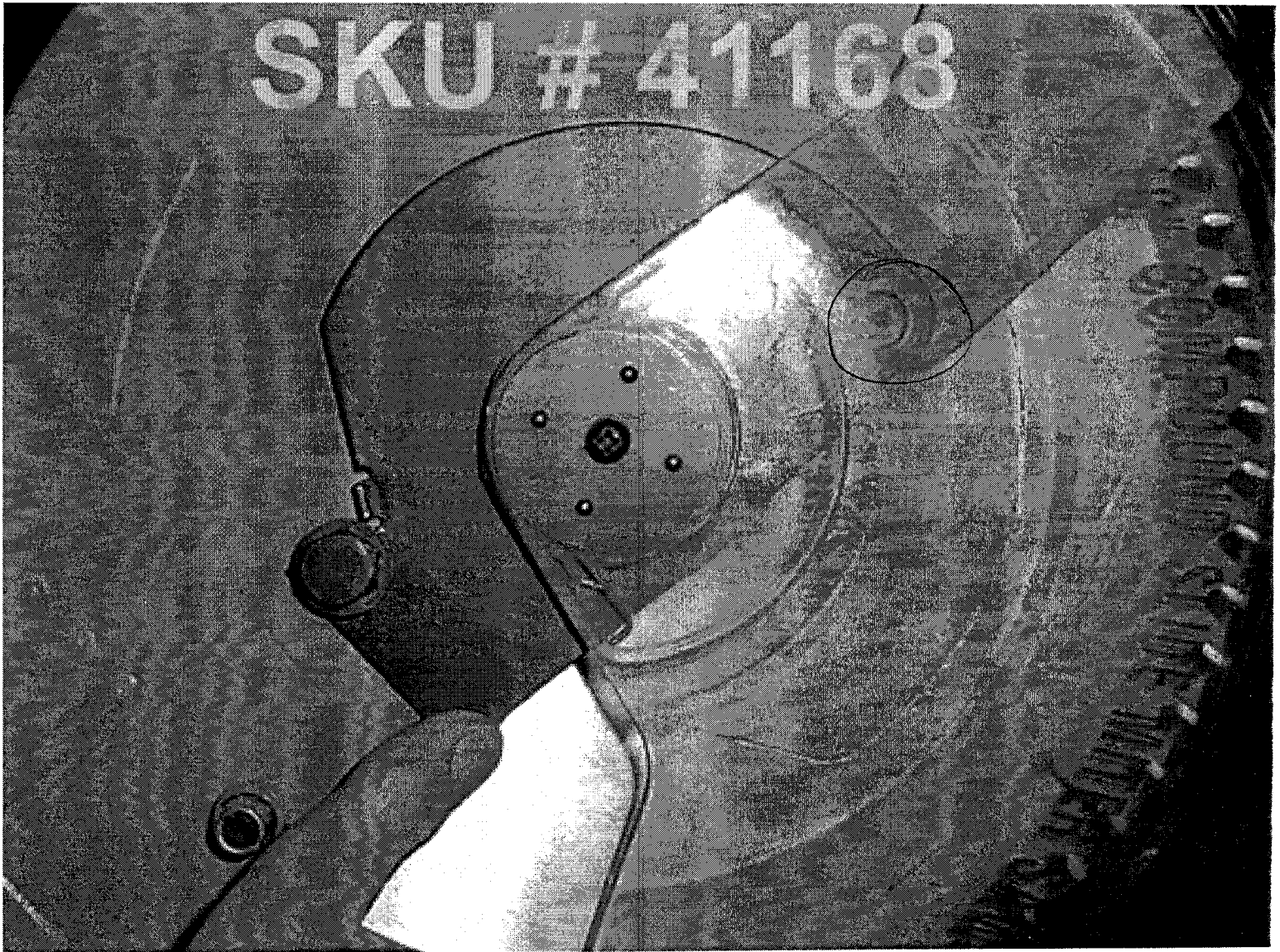


Install Blade Guard assembly on saw as shown.
Do not tension spring.

SKU #4168



Install guard on belt as shown. Do not tighten!



Holding guard assembly in place, push up and install screw. Tighten all hardware. Guard should raise and lower as saw is raised and lowered.